

CLAIMS

1. A packet-based communication network for communication through a communication network gateway comprising:

a firewall on the communication network gateway for securing communications to and from the network;

a communication device on the communication network connected to the firewall by a communication link;

a trusted entity linked to the firewall by a communication link, said link allowing information packets to be sent to a first communication pinhole through the firewall to the communication device; and

said trusted entity replacing an address designation in the address header of one of said information packets with an address designation for the first communication pinhole so the information packet can be transmitted through said pinhole to said communication device.

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2. The packet-based communication network for communication through a communication network gateway of Claim 1 wherein the first communication pinhole is established using signaling messages transmitted through the firewall.

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3. The packet-based communication network for communication through a communication network gateway of Claim 2 wherein the signaling messages include a create pinhole message.

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4. The packet-based communication network for communication through a communication network gateway of Claim 2 wherein the signaling messages include a create pinhole acknowledge message.

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5. The packet-based communication network for communication through a communication network gateway of Claim 1 wherein the trusted entity is a media proxy router.

6. The packet-based communication network for communication through a communication network gateway of Claim 1 wherein the trusted entity includes a component with a software functional switch.

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7. The packet-based communication network for communication through a communication network gateway of Claim 1 wherein the communication network includes an application server on the communication link between the firewall and the communication device.

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8. A method for routing information packets across a firewall to a packet-based communication network comprising the steps of:

5 receiving a create pinhole request at a trusted entity linked to the firewall of the communication network and located outside the communication network;

creating a pinhole communication port in the firewall in response to the create pinhole request;

10 receiving a first information packet at the trusted entity to be transmitted across the firewall through said pinhole;

replacing an address in the information packet address header information with a communication port address for a pinhole created in the firewall; and

15 forwarding the information packet to a destination address across the firewall using the communication port address for the pinhole communication port.

9. The method for routing information packets across a fire-
wall to a packet-based communication network of Claim 8
further comprising the steps of:

5 creating a communication port address routing table
association on the trusted entity for designated pinhole
ports in the firewall using address data from the create pin-
hole request.

- 10 10. The method for routing information packets across a fire-
wall to a packet-based communication network of Claim 8
further comprising the steps of:

 transmitting said create pinhole request from the
end-terminal to the trusted entity; and
 receiving a create media pinhole acknowledgement
15 at the end-terminal containing the communication port ad-
dress.

11. The method for routing information packets across a fire-
wall to a packet-based communication network of Claim 8
further comprising the steps of:

5 transmitting said create pinhole request from an ap-
plication server to the trusted entity; and

receiving a create media pinhole acknowledgement
at the application server.

- 10 12. The method for routing information packets across a fire-
wall to a packet-based communication network of Claim 8
wherein the application server is a session initiation proto-
col proxy server.

- 15 13. The method for routing information packets across a fire-
wall to a packet-based communication network of Claim 8
wherein the application server is an integrated access de-
vice.

14. The method for routing information packets across a fire-wall to a packet-based communication network of Claim 8 wherein the application server is an application proxy server.

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15. A method for using a pinhole communication port in a packet-based communication network firewall comprising the steps of:

5 providing a trusted entity having an input and an output outside the communication network;

linking said trusted entity to the pinhole communication port;

10 transmitting a first signal from the communication network to the input of the trusted entity, wherein said signal has an address designation for said pinhole communication port;

providing a routing table on the trusted entity with the address designations for the pinhole communication port;

15 receiving a packet transmission at the input of the trusted entity to be sent to a communication device inside the communication network;

20 placing the address designation for the pinhole communication port as the address header of the packet transmission; and

transmitting the packet transmission from the output
of the trusted entity to the pinhole communication port for
transmission onto the communication device.

- 5 16. The method for using a pinhole communication port in a
packet-based communication network firewall of Claim 15
further comprising the step of:

10 transmitting a second signal from the output of the
trusted entity containing the address designation of the
communication port, wherein said second signal acknowl-
edges receipt of the first signal.

- 15 17. The method for using a pinhole communication port in a
packet-based communication network firewall of Claim 16
further comprising the step of:

 receiving the second signal at the communication
device.

18. The method for using a pinhole communication port in a packet-based communication network firewall of Claim 16 further comprising the step of:

5 receiving the second signal at a server on the communication network.

19. The method for using a pinhole communication port in a packet-based communication network firewall of Claim 15
10 wherein the transmission packet contains voice data.

20. The method for using a pinhole communication port in a packet-based communication network firewall of Claim 15
15 wherein the transmission packet is a real time transport protocol information packet.